

REMARKS

Claims 16-41 remain in this application. Claims 16, 19, 27, and 33 have been amended to better define Applicants' invention. Claims 26, and 39-41 have been amended to improve language or correct typographical errors. Claims 16, 18-23, 25-37, 39 and 40 were rejected as anticipated by GB 2234208. Claims 17, 25 and 38 were rejected as obvious over GB 2234208. Claims 17 and 24 were also rejected as obvious over Breese et al. Claim 41 was rejected both as obvious over GB 2234208 in view of Habegger and over Breese et al. in view of Habegger. Applicants respectfully traverse these rejections.

Enclosed with this Amendment is a translation of the priority application on which this application was based. Since the priority application was filed in Japan prior to the filing date of Breese et al., Breese et al. is not a valid reference. The priority application was filed in Japan on August 26, 1999 prior to the filing data of Breese et al. on December, 30, 1999. Therefore, the rejections based on Breese et al. must be withdrawn. Since claim 41 was only rejected on combinations including Breese et al., it should be allowed. Furthermore, Applicants note that all of the claims are now directed to an energy absorbing steering device, in contrast to the driveshaft of Breese et al.

The remaining rejections are all based on GB 2234208. As amended, the remaining claims are allowable over this reference. The limitation that each fine member interleaved between the outer cylindrical member and the inner shaft member extends along a straight line without being bent has been added to each independent claim, i.e., claims 16, 27 and 33. With this addition, all claims clearly distinguish over the cited reference of GB 2234208. GB 2234208 discloses an energy absorbing steering device that uses a plurality fine members interleaved between the outer cylindrical member and the inner shaft member. However, each fine member is bent sharply in the middle of the fine member. The device utilizes the bent portion of the fine member to absorb the energy, and bending the fine member is essential in GB 2234208.

It is quite evident that interleaving the bent fine members being is a troublesome task, and the manufacturing cost of the energy absorbing steering device designed this way will be increased. Further the bent portions of the fine members around the inner shaft member tend to offset the center of the outer cylindrical member from the center of the inner shaft member. The spring force of the bent portion tends to vary depending on the fine members, and a strong spring force leads to a big clearance between the outer cylindrical member and the inner shaft member. On the other hand, a weak spring force leads to a small clearance between the outer cylindrical member and the inner shaft member. The variations of the spring forces around the inner shaft member cannot be avoided, and the variations of the spring forces tend to offset the center of the outer cylindrical member from the center of the inner shaft member. If the center of the outer cylindrical member is offset from the center of the inner shaft member, torque transmission between the shaft and cylinder becomes unstable.

In contrast with this prior art, the present invention uses fine members, each fine member extending along a straight line without being bent. Interleaving the straight fine members is a simple task, and the manufacturing cost of the energy absorbing steering device is greatly reduced. Also, the center of the outer cylindrical member coincides with the center of the inner shaft member, and torque transmission between the shaft and cylinder becomes stable. GB 2234208 fails to teach or suggest an energy absorbing steering device that uses a plurality fine members, each fine member extending along the straight line without being bent. In fact, as noted above, its teaching is to the contrary. In view of this claims 15-40 clearly distinguish over this art and should be allowed.

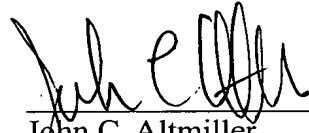
The Examiner is invited to call the undersigned at (202) 220-4200 to discuss any information concerning this application.

Applicants respectfully request a two month Extension of Time to respond to the Office Action of October 3, 2003. The extended period expires February 3, 2004.

The Office is hereby authorized to charge the fee of \$110.00 for a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) and any additional fees under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayment to Deposit Account No. 11-0600.

Respectfully submitted,

Date: February 3, 2004



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FIG.15

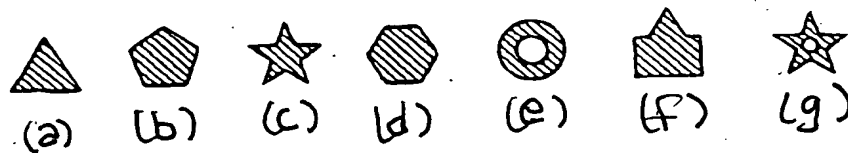


FIG.16

